

Claims

WE CLAIM:

1. A transceiver apparatus for creating a wireless personal local area network between a computer terminal and at least one peripheral device comprising:

radio means for receiving and transmitting information between said computer terminal and said peripheral device;

microprocessor means operably attached to said radio means for controlling said information received and transmitted by said radio means; and

interface means operably attached to said microprocessor means for operably attaching said transceiver to said terminal and said peripheral device.

2. The transceiver apparatus of claim 1 wherein said transceiver apparatus is removable from said computer terminal and said other peripheral devices whereby said removed transceiver apparatus can be replaced by a second transceiver apparatus having radio means for receiving and transmitting information and microprocessor means operably attached to said radio means for controlling said information received and transmitted by said radio means.

3. The transceiver apparatus of claim 2 wherein said second transceiver apparatus utilizes a different radio frequency for transmitting and receiving said information.

4. The transceiver apparatus of claim 2 wherein said second transceiver apparatus utilizes a different transmission power for transmitting and receiving said information.

1 5. The transceiver apparatus of claim 2 wherein said
2 second transceiver apparatus utilizes a different data transfer
3 rate for transmitting and receiving said information.

4 6. The transceiver apparatus of claim 2 wherein said
5 second transceiver apparatus utilizes a different modulation
6 method for transmitting and receiving said information.

7 7. The transceiver apparatus of claim 1 wherein said
8 microprocessor means utilizes idle sense protocol for controlling
9 said information received and transmitted and for controlling
10 power management and collision indications.

11 ~~8. A personal local area network for a data capture~~
12 system, comprising:

13 a first, a second and a third mobile data device, each data
14 device having a mobile power supply;

15 said second and said third mobile data device each being of
16 said size and weight to be carried by an individual user and
17 being operable to collect data and display data to the individual
18 user; and

19 a first, a second and a third radio frequency unit operably
20 and respectively attached to said first, said second and said
21 third mobile data devices, said radio frequency units providing
22 radio frequency communications between said first mobile data
23 device and at least one of said second and said third mobile data
24 devices and wherein said second and said third radio frequency
25 units provide communication directly therebetween in addition to
26 the provision of radio frequency communication with said first
27 ~~radio frequency unit.~~

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1 9. The personal local area network for a data capture
2 system of claim 8 wherein the mobile power supply of said first
3 mobile data device has a relatively high capacity in relation to
4 said mobile power supplies of said second and said third mobile
5 data devices, and said first mobile data device is in a standard
6 mode wherein said first mobile data device transmits IDLE SENSE
7 messages scheduled such that said second and said third radio
8 frequency units can remain dormant between IDLE SENSE messages as
9 part of an idle sense protocol and can be activated when they
10 have data to transmit at the time of the IDLE SENSE message, and
11 can be activated in a receive mode to receive a data message in
12 timed relation to each IDLE SENSE message.

13 10. The personal local area network for a data capture
14 system of claim 8 wherein the use of idle sense protocol
15 increases efficiencies in power management and consumption of
16 said mobile data devices.

17 11. The personal local area network for a data capture
18 system of claim 9 wherein one of said second and said third
19 mobile data devices automatically assumes the transmission of
20 scheduled IDLE SENSE messages when said first radio frequency
21 unit is out of range thereof.

22 12. The personal local area network for a data capture
23 system of claim 11 wherein said first mobile data device
24 automatically restores the standard mode of radio frequency
25 communication when it comes back into range of said second and
26 ~~said third mobile data devices.~~

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1 ~~13. The personal local area network for a data capture~~
2 system of claim 9 wherein said first mobile data device is
3 carried by a mobile vehicle and said second and said third mobile
4 data devices serve to collect and store data both within the
5 range of said first radio frequency unit and outside the range of
6 said first radio frequency unit.

7 14. The personal local area network for a data capture
8 system of claim 7 wherein said first, said second and said third
9 ~~mobile data devices are all carried by an individual user.~~

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10 ~~15. The personal local area network for a data capture~~
11 system of claim ⁸ ~~8~~ wherein said second said third radio frequency
12 units have a communication range of approximately two meters or
13 less.

14 ⁹ ~~16. The personal local area network for a data capture~~
15 system of claim ⁸ ~~15~~ wherein said first radio frequency unit has a
16 range of approximately ten meters.

17 ¹⁰ ~~17. The personal local area network for a data capture~~
18 system of claim ¹ ~~8~~ wherein said first radio frequency unit has a
19 range of approximately ten meters.

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